REMARKS/ARGUMENTS

This Amendment is in response to the Office Action mailed 01/29/2004. In the Office Action, Claims 1-15 were rejected under 35 U.S.C. § 103. Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Claims 1-15 remain in this application. To clarify the claim language, claims 1, 8, 9 and 13 have been amended.

Rejection Under 35 U.S.C. § 103

1. Claims 1-5, 8-10 and 12-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Robertson et al. (US Patent 5,670,984) ("Robertson") in view of Piazza et al. (US Patent 6,191,793) ("Piazza").

The Office Action states that "Applicant states that the eye point angle of the present invention is the angle formed from the viewpoint and the local surface normal however, amended claims 1, 8 and 13 now recite,...'the eye point δ angle being formed with respect to a normal of the polygon surface." (Office Action, page 9). The Office Action seems to indicate that the amendment is not the same as the argument. Applicant would like to point out that the phrase "the angle formed from the viewpoint and the local surface normal" is essentially the same as the phrase "angle being formed with respect to a normal of the polygon surface." The phrase "local surface normal" is the "normal of the polygon surface." Although the term "viewpoint" is not recited in the claim, the term "eye point" basically describes "a point in space from which a scene is viewed." (See specification, lines 9-10 of paragraph [0020])

2. The Office Action states that Robertson discloses the eye point δ angle as the angle formed between the viewpoint and the surface normal. To support this argument, the Office Action states that "Figure 1(c) shows an angle made from viewpoint (16) to the surface (18) with respect to the normal of the surface as a viewpoint vector could be drawn perpendicular to the surface." (Office Action, page 9). Applicant respectfully disagrees.

Figure 1(c) of Robertson merely shows the view from a viewpoint 16 through magnifier 12 to region 13. The magnifier 12 brings the region 13 closer to the viewpoint 16, resulting in an obscure region 18 (Robertson, col. 3, lines 10-15). This is shown in Figures 1(a) and 1(b). Figure 1(b) shows that the magnified region obscures the text portion underneath the magnifier.

The Office Action states that "a viewpoint vector could be drawn perpendicular to the surface." The mere fact that Robertson could be modified does not render the claimed invention obvious. See In re Mills, 916 F.2d 680, 16 U.S.P.Q. 23 (Fed. Cir. 1990). Here, Roberston fails to teach retention of such an angle and to perturb each such angle at each polygon fragment, and to incorporate perturbed texel angles as recited in the claim. Figure 1(c) does not define such an angle, and even if Figure 1(c) implicitly defines such an angle, it does not disclose that such an angle is retained within a vertex data passed to a graphics rendering pipeline as recited in claim 1.

Robertson merely teaches that if a lens panel is positioned high enough, it will move outside the pyramid defined by the viewpoint and the base image, in which case the lens panel will not be visible. To avoid this situation, the viewpoint moves with the lens (Robertson, col. 8, lines 64-67; col. 9, lines 1-2). This means that magnifying the text portion too much causes a portion of the text to not be visible within the limits of the display area and therefore the viewpoint has to be moved with the lens accordingly. The viewpoint tracks the lens panel to keep the lens panel in view (Robertson, col. 9, lines 17-19). Robertson does not teach or suggest retaining each eye point δ angle for each vertex of a polygon.

Here, each eye point δ angle is retained within a vertex data of a polygon (See Specification, page 5, paragraph [0022]; Figures 8(a) and 8(b) and elements 46).

The Office Action further states that "the office interprets the eye point angle... to be substantially similar to the angle formed by the coordinates of the viewpoint vs. the dimensions of the image lens." Applicant respectfully disagree. An angle cannot be formed by coordinates of a point with dimension of a lens. An angle is formed with respect to a line (e.g., a surface normal). Also, as discussed above, Robertson merely discloses moving the viewpoint according to where the lens panel is and how it is moved (Robertson, col. 9, lines 8-10). Robertson merely discloses recalculating the viewpoint coordinates (eye_x, eye_y) according to the lens coordinates and the change in lens coordinates (Robertson, col. 9, lines 19-23) to keep the lens panel in view. Robertson does not disclose or suggest retaining the eye point δ angle within a vertex data. Also the calculations of the new viewpoint coordinates in Robertson are based entirely on the coordinates of the old viewpoint coordinates and the lens coordinates and their displacements. There is no angle formation.

Furthermore, Robertson does not disclose or suggest "perturbing each eye point δ angle value at each polygon fragment." Robertson merely discloses moving the viewpoint according to the lens position. This is different than perturbing each eye point δ angle because as discussed above, it is the viewpoint, not the eye point δ angle. Also, "moving" is not the same as "perturbing". Moving is physically displacing the viewpoint from one place to another whereas in the present invention, the viewpoint remains fixed (See Figure 8(a) and 8(b)) and only the eye point angle is perturbed. Perturbing here refers to multiplying the eye point δ angle by a value of N and providing an offset to each texel coordinates (See specification, page 8, lines 2-7, and claim 2).

The Office Action further states that Piazza discloses the zoom pyramid which stores a sequence of texture maps, made up of texels, of the same texture pattern to be used at different relative distances from the object to the viewer. However, this is not related to "incorporating a texel to each perturbed angle". Piazza merely discloses texture mapping when an object moves in relative distance from the viewer (Piazza, col. 1, lines 25-27). Piazza does not even disclose or suggest an eye point δ angle, therefore it does not disclose or suggest perturbing the eye point δ angle.

In summary, neither Robertson nor Piazza, alone or in combination, suggests the invention as claimed in independent claims 1, 8 and 13. Therefore, Applicant respectfully requests that the Examiner withdraw the rejection of claims 1-5, 8-10 and 21-15 under 35 U.S.C.

§ 103(a) as being unpatentable over Robertson et al. (US Patent 5,670,984) in view of Piazza et al. (US Patent 6,191,793).

Conclusion

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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